

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Prior Application:

Applicant: Mahant-Shetti

Art Unit: 2612

Serial No.: 09/073,370

Examiner: Luong Nguyen

Filed: May 5, 1998

Docket: TI-21674

For: CMOS SENSOR CAMERA WITH ON-CHIP IMAGE COMPRESSION

This Application:

Applicant: Mahant-Shetti

Art Unit:

Serial No.:

Examiner:

Filed: December 18, 2001

Docket: TI-21674.1

For: CMOS SENSOR CAMERA WITH ON-CHIP IMAGE COMPRESSION

**Preliminary Amendment**

Assistant Commissioner for Patents

Washington, D.C. 20231

Dear Sir:

Prior to examination on the merits of this application, please make the following amendments.

In the Claims

Please amend the claims as follows:

Cancel claims 1 to 6 and 10 to 16.

Add new claims 17 to 20 as follows:

1 17. The method of Claim 8, wherein:

2 said step of dividing the wordline period into intervals  
3 includes dividing a wordline period  $T$  into eight intervals of  
4 duration  $T_{\cos}(n \times 11.25)$ , where  $n$  is an integer 0, 1, 2, 3, 4, 5, 6  
5 or 7.

1 18. The method of Claim 7, wherein:

2 said step of dividing the wordline period into intervals  
3 includes dividing a wordline period  $T$  into intervals  $t_0 = 0$ ,  
4  $t_1 = 0.19T$ ,  $t_2 = 0.38T$ ,  $t_3 = 0.55T$ ,  $t_4 = 0.71T$ ,  $t_5 = 0.83T$ ,  
5  $t_6 = 0.92T$  and  $t_7 = T$ .

1 19. The method of Claim 18, wherein:

2 said step of dividing a bitline period into said intervals and  
3 into subintervals includes

4 dividing an interval  $t_1 - t_0$  into subintervals  
5  $t_{11} = 0.19(t_1 - t_0)$ ,  $t_{12} = 0.38(t_1 - t_0)$ ,  $t_{13} = 0.55(t_1 - t_0)$ ,  
6  $t_{14} = 0.71(t_1 - t_0)$ ,  $t_{15} = 0.83(t_1 - t_0)$ ,  $t_{16} = 0.92(t_1 - t_0)$  and  
7  $t_{17} = (t_1 - t_0)$ ,

8 dividing an interval  $t_2 - t_1$  into subintervals  
9  $t_{21} = 0.19(t_2 - t_1)$ ,  $t_{22} = 0.38(t_2 - t_1)$ ,  $t_{23} = 0.55(t_2 - t_1)$ ,  
10  $t_{24} = 0.71(t_2 - t_1)$ ,  $t_{25} = 0.83(t_2 - t_1)$ ,  $t_{26} = 0.92(t_2 - t_1)$  and  
11  $t_{27} = (t_2 - t_1)$ ,

12 dividing an interval  $t_3 - t_2$  into subintervals  
13  $t_{31} = 0.19(t_3 - t_2)$ ,  $t_{32} = 0.38(t_3 - t_2)$ ,  $t_{33} = 0.55(t_3 - t_2)$ ,  
14  $t_{34} = 0.71(t_3 - t_2)$ ,  $t_{35} = 0.83(t_3 - t_2)$ ,  $t_{36} = 0.92(t_3 - t_2)$  and  
15  $t_{37} = (t_3 - t_2)$ ,

16 dividing an interval  $t_4 - t_3$  into subintervals  
17  $t_{41} = 0.19(t_4 - t_3)$ ,  $t_{42} = 0.38(t_4 - t_3)$ ,  $t_{43} = 0.55(t_4 - t_3)$ ,  
18  $t_{44} = 0.71(t_4 - t_3)$ ,  $t_{45} = 0.83(t_4 - t_3)$ ,  $t_{46} = 0.92(t_4 - t_3)$  and  
19  $t_{47} = (t_4 - t_3)$ ,

20           dividing an interval  $t_5 - t_4$  into subintervals  
 21            $t_{51} = 0.19(t_5 - t_4)$ ,  $t_{52} = 0.38(t_5 - t_4)$ ,  $t_{53} = 0.55(t_5 - t_4)$ ,  
 22            $t_{54} = 0.71(t_5 - t_4)$ ,  $t_{55} = 0.83(t_5 - t_4)$ ,  $t_{56} = 0.92(t_5 - t_4)$  and  
 23            $t_{57} = (t_5 - t_4)$ ,  
 24           dividing an interval  $t_6 - t_5$  into subintervals  
 25            $t_{61} = 0.19(t_6 - t_5)$ ,  $t_{62} = 0.38(t_6 - t_5)$ ,  $t_{63} = 0.55(t_6 - t_5)$ ,  
 26            $t_{64} = 0.71(t_6 - t_5)$ ,  $t_{65} = 0.83(t_6 - t_5)$ ,  $t_{66} = 0.92(t_6 - t_5)$  and  
 27            $t_{67} = (t_6 - t_5)$ ,  
 28           dividing an interval  $t_7 - t_6$  into subintervals  
 29            $t_{71} = 0.19(t_7 - t_6)$ ,  $t_{72} = 0.38(t_7 - t_6)$ ,  $t_{73} = 0.55(t_7 - t_6)$ ,  
 30            $t_{74} = 0.71(t_7 - t_6)$ ,  $t_{75} = 0.83(t_7 - t_6)$ ,  $t_{76} = 0.92(t_7 - t_6)$  and  
 31            $t_{77} = (t_7 - t_6)$ .

1           20. The method of Claim 9, wherein:  
 2           said step of dividing the wordline period into intervals  
 3           includes dividing a wordline period  $10T$  into intervals  $t_0 = 0$ ,  
 4            $t_1 = 2T$ ,  $t_2 = 4T$ ,  $t_3 = 6T$ ,  $t_4 = 7T$ ,  $t_5 = 8T$ ,  $t_6 = 9T$  and  $t_7 = 10T$ .

#### REMARKS

The claims are claims 7 to 9 and 17 to 20.

Claims 1 to 6 and 10 to 16 have been canceled. Claims 7 to 9 correspond to Group II of the restriction requirement of October 29, 2001 in the parent application serial no. 09/073,370 of this divisional application.

New claims 17 to 20 have been added. New claims 17 to 19 recite the intervals for the wordline periods and the bitline periods for the discrete cosign transform disclosed in the original application at page 10, line 7 to page 11, line 5. Claim 20 recites the intervals for the wordline periods and the bitline

periods for the articulated trapezoid transform disclosed in the original application at page 17, lines 7 to 34.

The Applicants respectfully submit that all the present claims are allowable for the reasons set forth above. Therefore early consideration on the merits and advance to issue are respectfully requested.

If the Examiner has any questions or other correspondence regarding this application, Applicants request that the Examiner contact Applicants' attorney at the below listed telephone number and address to facilitate prosecution.

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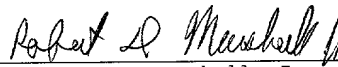
Respectfully submitted,



Robert D. Marshall, Jr.  
Reg. No. 28,527

**MAILING CERTIFICATE**  
**Under 37 C.F.R. 1.8**

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Assistant Commissioner for Patents, Washington, DC 20231 on **December 18, 2001.**



Robert D. Marshall, Jr.  
Registration No. 28,527

VERSION WITH MARKINGS TO SHOW CHANGES MADE

Note inserted text is marked by underlining and deleted text is marked by ~~strikeout~~.

In the Claims

Please amend the claims as follows:

Cancel claims 1 to 6 and 10 to 16.

Add new claims 17 to 20 as follows:

17. The method of Claim 8, wherein:

said step of dividing the wordline period into intervals includes dividing a wordline period T into eight intervals of duration  $T_{cos}(n \times 11.25)$ , where n is an integer 0, 1, 2, 3, 4, 5, 6 or 7.

18. The method of Claim 7, wherein:

said step of dividing the wordline period into intervals includes dividing a wordline period T into intervals  $t_0 = 0$ ,  $t_1 = 0.19T$ ,  $t_2 = 0.38T$ ,  $t_3 = 0.55T$ ,  $t_4 = 0.71T$ ,  $t_5 = 0.83T$ ,  $t_6 = 0.92T$  and  $t_7 = T$ .

19. The method of Claim 18, wherein:

said step of dividing a bitline period into said intervals and into subintervals includes

dividing an interval  $t_1 - t_0$  into subintervals  $t_{11} = 0.19(t_1 - t_0)$ ,  $t_{12} = 0.38(t_1 - t_0)$ ,  $t_{13} = 0.55(t_1 - t_0)$ ,  $t_{14} = 0.71(t_1 - t_0)$ ,  $t_{15} = 0.83(t_1 - t_0)$ ,  $t_{16} = 0.92(t_1 - t_0)$  and  $t_{17} = (t_1 - t_0)$ ,

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23  $t_{57} = (t_5-t_4)$ ,

24 dividing an interval  $t_6-t_5$  into subintervals  
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26  $t_{64} = 0.71(t_6-t_5)$ ,  $t_{65} = 0.83(t_6-t_5)$ ,  $t_{66} = 0.92(t_6-t_5)$  and  
27  $t_{67} = (t_6-t_5)$ ,

28 dividing an interval  $t_7-t_6$  into subintervals  
29  $t_{71} = 0.19(t_7-t_6)$ ,  $t_{72} = 0.38(t_7-t_6)$ ,  $t_{73} = 0.55(t_7-t_6)$ ,  
30  $t_{74} = 0.71(t_7-t_6)$ ,  $t_{75} = 0.83(t_7-t_6)$ ,  $t_{76} = 0.92(t_7-t_6)$  and  
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1 20. The method of Claim 9, wherein:  
2 said step of dividing the wordline period into intervals  
3 includes dividing a wordline period  $10T$  into intervals  $t_0 = 0$ ,  
4  $t_1 = 2T$ ,  $t_2 = 4T$ ,  $t_3 = 6T$ ,  $t_4 = 7T$ ,  $t_5 = 8T$ ,  $t_6 = 9T$  and  $t_7 = 10T$ .